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ABSTRACT

This report describes a preliminary methodology by which distressed communities may be identified using school districts as the basic unit for the presentation of data. Distress consists of a concentration of the following types of need: (1) economic; (2) social; and (3) educational. Distress was measured by an index that determined a district's concentration of these needs. Specific indicators for each of the distress dimensions are identified. Based on this preliminary definition, highly distressed areas within New York State are identified. These areas display the greatest need for an integrated approach to community problems. Tables, maps, and figures illustrate the data. (BJV)

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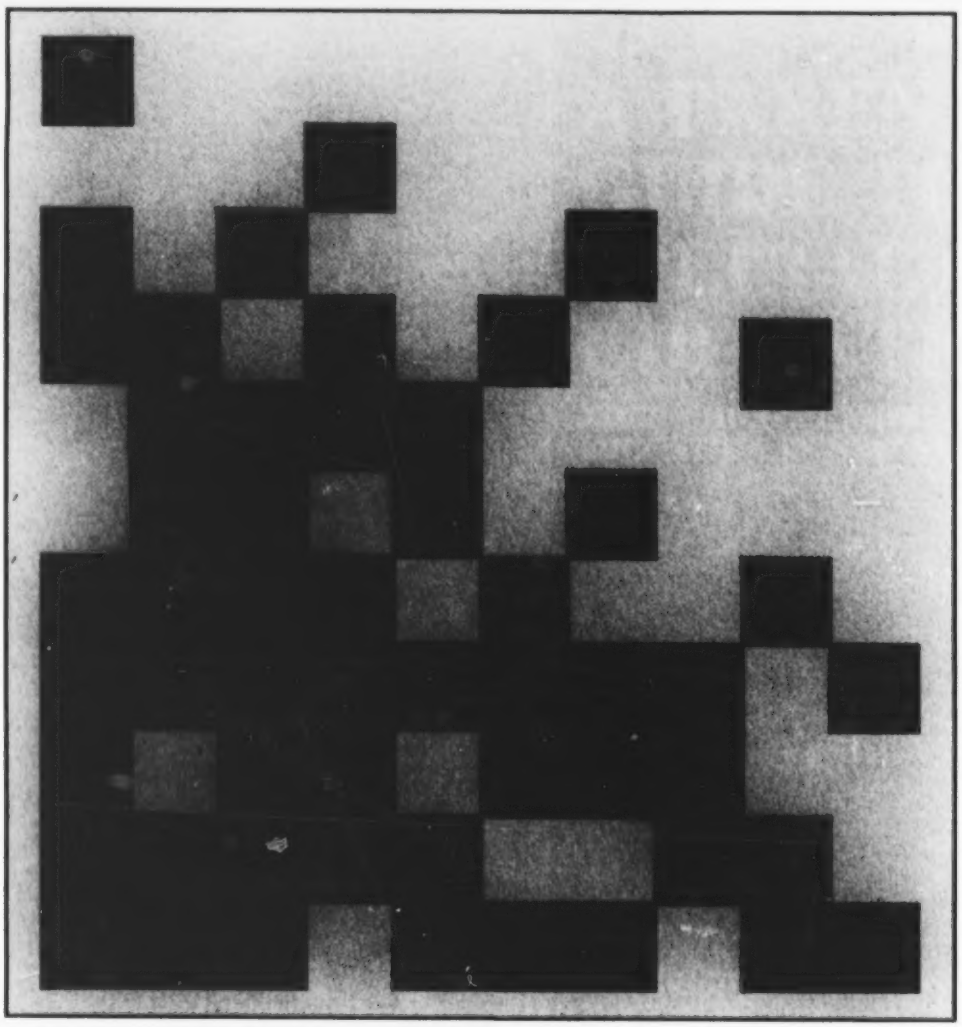
EDUCATION AND COMMUNITY RENEWAL

ASSESSMENT OF NEED IN DISTRESSED COMMUNITIES



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December 1987

EDUCATION AND COMMUNITY RENEWAL: ASSESSMENT OF NEED IN DISTRESSED COMMUNITIES

The Regents policy statement on Education and Community Renewal called for the identification of distressed communities as a step in the targeting of educational resources to support the delivery of school-based services to these areas. This research report describes a preliminary methodology by which distressed communities may be identified using school districts as the basic unit for the presentation of data. The results show that distress is concentrated in urban communities and sparsely populated rural areas. The report contains maps which graphically illustrate levels of distress in New York City by community school district. These maps are based on several indices of need. Ongoing efforts to develop maps for the rest of the State are also discussed.

The University of the State of New York/**THE STATE EDUCATION DEPARTMENT**
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December 1987

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Preface

This report is a companion to **Education and Community Renewal: Regents Policy and Service Models**, which contains the Board of Regents policy statement on Education and Community Renewal. The policy statement called for development of a methodology to systematically identify distressed areas having the most severe combination of educational, social, and economic need in the State.

This report describes a preliminary methodology to identify distressed communities. Based on the results of the identification methodology, distress is not randomly distributed but is concentrated in urban and rural communities. Maps illustrating levels of distress within New York City are also presented as a means of visualizing the distribution of distress.

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Summary

This report is a companion piece to **Education and Community Renewal: Regents Policy and Service Models**[1], which contains the 1985 policy statement of the State Board of Regents on education and community renewal. The policy statement called for the identification of distressed communities as a step in the targeting of educational resources to support the delivery of school-based services to these areas. This report describes a preliminary methodology by which distressed communities may be identified using school districts as the basic unit for the presentation of data.

The methodology to identify distress was based on the view that distress is multi-dimensional and consists of a severe concentration of economic, social, and educational need. Distress was measured by an index, which determined a district's concentration of economic, social, and educational need. Computation of the index was expressed as the average of the three "need dimensions":

$$\text{Distress Index} = \frac{\text{Economic Need} + \text{Social Need} + \text{Education Need}}{3}$$

Each of the three need dimensions or factors was based on four variables. Individual variables were weighted equally and values for any given variable were converted into percentiles. For each need dimension the percentile scores were summed and the result divided by the number of variables. The composite index was computed as the sum of the three need dimensions divided by the number of dimensions.

Due to the desire to measure distress at the smallest unit for which the Department has data, distress was measured by school district as districts existed at the time of the 1980 Census and to analyze New York City as 32 community school districts. This allowed for the identification of distress at a more discrete level, since 747 communities were analyzed as compared to the 695 major school districts in the 1987-88 school year.

The results of the methodology were analyzed according to six types of school districts (New York City community school districts, Other Big Five, small city, downstate suburban, upstate suburban, and rural). The results indicate that distress is concentrated in both urban communities and sparsely populated rural areas. The report contains maps which graphically illustrate levels of distress in New York City by community school districts. These maps are based on several indices of need. The report also discusses ongoing efforts to develop maps for the rest of the State.

[1] New York State Education Department, Educational Research Services Unit, **Education and Community Renewal: Regents Policy and Service Models**, September 1987.

I.

Introduction

The State's Economic Policy

In his 1987 Message to the Legislature, Governor Cuomo noted that "New York and other states now face the historic opportunity of finding new solutions to our economic problems while building upon older successful policies". The Governor accordingly outlined a plan to strengthen New York's economic posture that included targeted assistance to areas "severely impacted by unemployment and poverty".

To assist economically distressed areas, the Economic Development Zones program was established (Chapter 686 of the Laws of 1986). This program seeks to improve the economic infrastructure of distressed communities by stimulating increased capital investment, business development, job creation, and economic revitalization within designated zones. Existing and new businesses within the zones are provided incentives, particularly tax credits, reductions in energy charges, improved coordination of local resources, and streamlined regulatory procedures. In addition to these capital investment incentives, each economic development zone was also required to develop a human resource improvement plan.

In a related effort the Governor's Task Force on Poverty and Welfare released a report in December 1986[1] addressing the plight of poor and economically distressed communities. Some of the Task Force's recommendations included: 1) to create the jobs necessary to maintain a high productivity, full employment economy; 2) to create a first-class labor force, through "employability"-oriented, educational strategies of basic education, training, and retraining; and, 3) to guarantee access to employment opportunities, especially in distressed communities. While the report emphasized traditional economic development and employability strategies, a special role was assigned to community development efforts and economic development initiatives at the neighborhood level. As the Task Force noted, "many of our community development efforts in the past either bypassed existing community organizations or even competed with them." Such approaches in the Task Force's view had generally been ineffective. For this reason the Task Force recommended that economic development efforts in distressed communities be focused on strengthening existing, local resources within such communities.

The Regents On Education and Community Renewal

In response to the need for institutional innovation to more effectively address the educational needs of individuals and families living in distressed areas, the Board of Regents adopted in November 1985 a policy statement on **Education And Community Renewal: The Role of Schools In Addressing The Needs of Economically Distressed Areas**[2]. The policy statement analyzed the need and stressed the role of schools in cooperating with other service providers to address the interrelated social, physical, and economic problems faced by youth and their families in economically distressed areas. The Regents specifically called for the use of schools as bases of operation for the delivery of services in distressed areas where student performance is jeopardized by community conditions. Schools would be comprehensive service sites designed to marshall existing community resources in addressing these problems as a way of promoting successful educational performance. Key to the Regents policy is the concentration of edu-

[1] The Task Force report, **A New Social Contract: Rethinking the Nature and Purpose of Public Assistance** was released in December 1986. Staff support to the Task Force was provided by the New York State Department of Social Services.

[2] As previously noted, the policy statement is contained in **Education and Community Renewal: Regents Policy and Service Models.**

cation resources in schools within distressed communities and the stimulation of active collaboration with State and local programs designed to further local economic development. The development of initiatives to collaborate with programs such as the Economic Development Zones program are explicitly contemplated within the Regents policy framework.

The Community Renewal Approach

Out-of-school socioeconomic conditions, while not the only ones involved, often are at the root of poor academic performance. Improvement of these conditions is as crucial to the success of individuals in distressed areas as the improvement of in-school conditions. To do so, the Regents policy on Education and Community Renewal calls for:

1. Development of comprehensive criteria to identify public schools that are most in need within economically distressed areas;
2. Development of a school-based service delivery model that would include the following components:
   a) **Human services for students and their families designed to address the out-of-school causes of low performance and dropping out**. Examples of these services are dental and health clinics, nutrition programs, drug rehabilitation and prevention programs, day-care services and after-school programs, and career counseling for youth and adults.
   b) **Academic support services available on a 12-month, extended week, morning to evening basis**. Examples of these services are instructional programs with more time-on-task for curricular activities, tutoring, mentoring, intergenerational support services, business/industry volunteer programs, and parent/teacher/counselor conferences.
   c) **Educational services of schools targeted on hard-to-serve or special populations such as preschool children, unemployed adults, the elderly, pregnant teenagers, and others**. Examples of these programs are prekindergarten programs, high school equivalency programs, adult basic education programs, English as a Second Language, skills training for youth and adults, and occupational training for the elderly.

These services should be available 12 months a year, on an extended 8:00 a.m. to 6:00 p.m. day schedule. Computer-managed educational techniques to improve the delivery of services and education to highly mobile K-8 population should be implemented. The theme of self-help should be incorporated where feasible. The development of a managerial structure should be established within the school building with the principal and the director of support services having responsibility for ensuring a collegial working relationship among participating agencies, promoting the efficient use of available facilities and resources, and assessing the delivery system's responsiveness to the community's needs.

Purpose

The successful implementation of the Regents Community Renewal policy requires the capacity to identify areas in the State with the greatest degree of distress. It is the purpose of this report to describe a methodology for achieving that goal. The report examines major conceptual dimensions of overall community distress, and devises specific indicators to be used for each of the distress dimensions. Based on this preliminary definition, highly distressed areas within the State are identified. These areas display the greatest need for an integrated approach to community problems.

II.

Identification of Distressed Communities

General Considerations

The development of a specific methodology to identify the distress of a community required addressing three interrelated questions:

1. What is meant by the term "distress"?
2. Are valid and reliable data available in order to define the distress concept? and,
3. At what level should the identification of distress be made (i.e., at the block, census tract, school district, county, or regional level of aggregation)?

Distress. Communities experiencing distress could be defined as having severe economic needs such as high unemployment, low income, and a high percentage of the population below the poverty level. Such a definition, however, is restrictive since it stresses only the economic aspects of community life, and does not include other institutional aspects of a community.

The economic system alone cannot be expected to redress a society's failure to effectively develop and use its human resources. The creation of jobs and the provision of new economic opportunities in distressed areas will not necessarily help the unemployed and the poor to enter the economic mainstream of society. Education, training, and other investments in human beings are necessary to ensure that the poor and unemployed are able to benefit from new economic opportunities. The absence of these types of institutional support can exercise a critical and negative impact upon an individual's accessibility to an available labor market.

A community's institutional opportunity and support structures can strongly influence the likelihood of youth and adult access to and involvement in productive, conventional economic positions. A community with weak institutional support structures will have difficulty in providing residents with economic and educational opportunities. Jobs will not be available and, even if jobs were available, residents will lack the employment skills to function successfully. In such communities, severe economic problems are typically not temporary and will continue to exist for the foreseeable future. Education is one of the major institutional means by which the door to improved economic opportunity can be unlocked.

Since the goal of the community renewal policy is to address conditions which may minimize educational success, a broad definition of "distress" is required – a definition which includes the support and institutional structure of a community.

General distress can be viewed as a multi-dimensional construct consisting of three interrelated factors. These factors are: *economic need*, *social need*, and *educational need*. Communities will typically differ on each of the three needs. For example, some communities might be rated as high in economic need but low in educational need. The point of departure in this report is this: In the identification of community renewal areas, distress should be viewed only as an extremely severe concentration of economic, social, and educational need as depicted in Figure 1 and further elaborated in the proposed methodology.

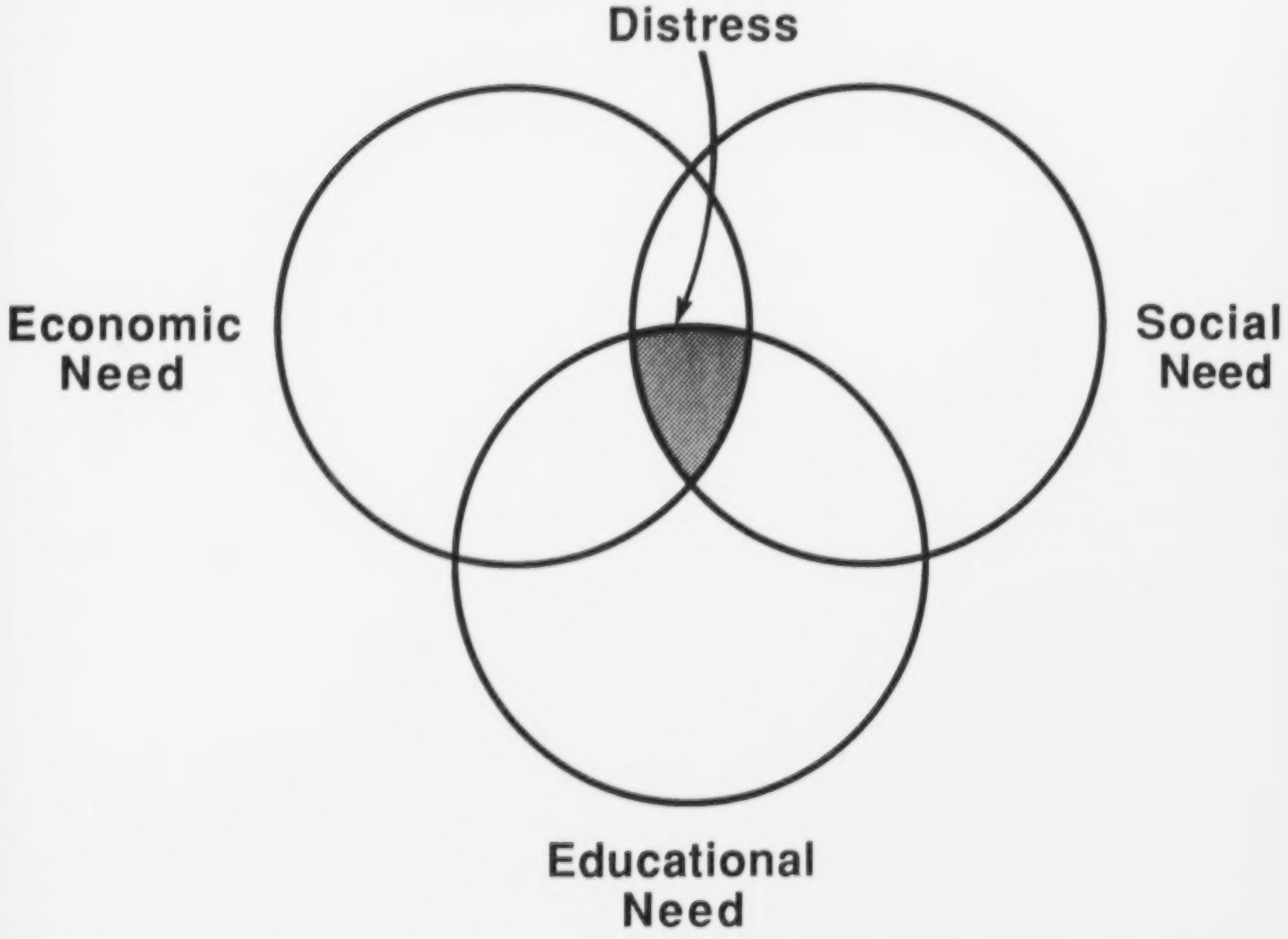
Data Availability. The adequacy of any indicator of need is ultimately dependent upon available data. Data on social and economic characteristics are available from a variety of sources. The 1980 Census, for example, collected data on a wide variety of topics. These data are available by census tract and have been aggregated to the school district level; in New York City, census data have been aggregated at the community school district level.

Data collected after the 1980 Census are also available. The New York State Department of Labor, for example, periodically updates unemployment rates, and the United States Bureau of the Census updates census data with its Current Population Surveys. Unemployment statistics, however, are collected at the county level and are not available by school district. Current Population Surveys provide sample data which are valid and reliable at the State level. Current Population Survey data, due to sampling limitations, are generally considered to lack the precision desired when aggregated at levels lower than the State.

For these reasons, the best source of valid and reliable data on the social and economic characteristics of geographic or political units smaller than a county continues to be the 1980 Census. It is hardly surprising that data from the 1980 Census were used by New York State's planners to initially identify eligible areas for designation as economic development zones.

FIGURE 1

Distress: A Concentration of Severe Economic, Social, and Education Need



As noted, these census data are available by school district (and community school districts in New York City) but are not available by school building catchment area.

Level of Identification. Distress should be identified at the smallest, but most meaningful geographic level of aggregation for which valid and reliable data are available to the State Education Department. Since the most valid and reliable data on units smaller than a county are provided by the 1980 Census, these data were the source used in the identification process. Due to the desire to measure distress at the smallest, but educationally meaningful level possible, distress is measured at the school district level as districts were defined at the time of the 1980 Census[1]; as noted the New York City school district is analyzed as 32 community school districts and any subsequent reference in the report to school districts reflects this convention.

Proposed Methodology to Identify Areas with the Greatest Distress

As previously noted, the proposed methodology for identifying distressed communities is based upon the view that the distress construct is multidimensional and that distress consists of an extremely severe concentration of economic, social, and educational needs. Distress is measured by a composite index which determines a district's concentration of economic, social, and educational need. The index is computed as the average of the three "need" dimensions, each of which is given equal weight:

$$\text{Distress Index} = \frac{\text{Economic Need} + \text{Social Need} + \text{Education Need}}{3}$$

Each of the three need factors is based on four variables reflecting the specific need dimension. Since the objective of the methodology was to identify community rather than school district need, the individual variables used were based on the general populations of a district; rather than the school-aged population. The individual variables used should not be viewed as specific causes of distress; rather, they should be viewed as indicators of a possible problem.

Throughout the analysis individual districts are accorded an equal weighting and are not population weighted. District values for any given variable were converted into percentile scores. For each need dimension the percentile scores were summed with the result divided by four, the number of variables composing the need dimension. The composite index of distress was calculated as the sum of the scores for the three need dimensions with the result divided by three.[2]

Economic Need

Communities with high economic need can provide only minimal economic opportunity to their residents. There is little likelihood that residents will be able to participate meaningfully in productive economic roles. Students from such communities will frequently live in poverty and come from single parent families.

Economic need will be defined through the use of an index based on four equally weighted variables from the 1980 Census. Basing the index on four variables ensures the identification of communities experiencing the greatest concentration of economic distress rather than identifying communities with high need or only one or two specific indicators. The variables used to define the economic need index include:

- income per capita;
- percent of persons below poverty;
- unemployment rate; and,
- long-term unemployed as percent of the unemployed.

Income Per Capita. Income per capita measures the relative wealth of a community. Low income per capita can reflect widespread nonparticipation in the job market by residents of a community or an active labor force primarily concentrated in low paying jobs. In either case, residents possess a limited capacity to purchase goods and services. The possibility of major economic expansion based primarily on the local market would appear to be severely limited, since the purchasing power of residents, both individually and collectively, would be highly restricted. A community with low income per capita may also experience considerable difficulty in raising the local revenues required to adequately fund its educational program. Many residents will be financially incapable of either supporting directly or indirectly (with rental fees) relatively high property taxes to finance schools.

The income per capita indicator was computed in two steps. First, average income per capita of school districts was ranked

[1] Districts which have reorganized since 1980, therefore, are analyzed as separate communities.

[2] See Appendix A for a more complete description of the rationale for choosing this methodology

from high to low. Second, the rankings were then converted into percentile scores[5].

Percent of Persons Below the Poverty Line. Individual or family poverty is often at the core of economic, physical, and social problems which must be addressed before individuals can benefit from education and training programs. A recent report of the United States Department of Education (**Poverty, Achievement and the Distribution of Compensatory Education Services**, 1986), which assessed Chapter 1 of the Education Consolidation and Improvement Act, found that the duration of a family's exposure to poverty conditions and the concentration of children in poverty within a school were strongly related to educational achievement. The report also found that the prevalence of low-achievers was larger among poor and non-poor students alike in schools which served higher proportions of poor students. In fact, "non-poor students attending a school with large proportions of poor students are more likely to fall behind than are poor students who attend a school with a small proportion of poor students."

The Governor's Task Force on Poverty and Welfare found that "fewer than half of the people who were poor in 1984 lived in households where some one received cash income from public assistance... While virtually all of the poor are eligible for Food Stamps, the majority of the working poor choose not to participate in the program due to perceived stigma, administrative obstacles and other reasons". In the Task Force's view, to overcome poverty, the barriers which prevent individuals from making full use of economic opportunities must be reduced. In particular, adequate affordable child care, health insurance, and child support in single-parent families are needed if individuals are to take full advantage of economic opportunities.

The indicator for the percent of persons below the poverty line was computed in three steps. First, the number of persons below the poverty line in a district was divided by the sum of the persons above and below the poverty line and then multiplied by 100 to provide a percentage. Second, districts were ranked from low to high according to their percentage. Third, the rankings were then converted into percentile scores.

Unemployment Rate. A high unemployment rate within a community is a clear indicator of economic stress. In communities with high unemployment rates, job opportunities are minimal and individuals may have little hope of improving their economic situation. The unemployment rate as a measurement of economic need is so important that it was one of the criteria used in the identification of potential economic development zones.

It is important to note that the economic distress caused by widespread unemployment may be temporary. The high unemployment rate could be primarily caused by the closing or moving of a major employer within the area. Although the economic distress caused by such a event is profound, if the community has a strong economic base, then, over time, the unemployment rate will decline. However, even in times of economic prosperity, high unemployment rates tend to be characteristic of distressed communities.

The unemployment rate indicator was calculated in three steps. First, the number of unemployed persons was divided by the civilian work force (those individuals who are employed or actively seeking employment) and then multiplied by 100. Second, the district rates were then ranked from low to high. Third, the rankings were then converted into percentile scores.

Long-term Unemployed As a Percent of the Unemployed. Long-term unemployment is a reflection of the strength or weakness of a community's economic structure. A high level of long-term unemployment (individuals who have been unemployed for 15 weeks or more) is clear evidence of the chronic lack of economic opportunity for individuals seeking employment. A community with a high concentration of long-term unemployment has an economic climate which does not foster the creation of jobs or the general improvement in the economic opportunities of its residents.

This long-term unemployment indicator was calculated in three steps. First the number of long term unemployed was divided by the number of unemployed and then multiplied by 100 to yield a percent. Second, district percentages were ranked from low to high. Third, the rankings were then converted into percentile scores.

Calculation of the Economic Need Index. As was previously discussed, an index of economic need is calculated for each district. Economic need is measured by summing the percentile scores of the four variables and dividing this sum by four.

Social Need

In addition to a lack of economic opportunity, a weak social support structure is characteristic of many distressed communities. When needed social support systems are weak, it is difficult for community residents to achieve academic and economic success.

A weak social support structure makes it more difficult for youngsters to develop the commitment and the skills necessary to complete high school, attend college, and secure productive employment. A recent report of the United States Department of Education (**The Condition of Education, 1985**), underscored this point when it reported that the socioeconomic status of students was highly associated with the tendency of pupils to drop out of high school. Among dropouts, the rate at which such individuals returned to school increased

[5] A district's percentile score is its rank on a particular variable divided by 747 (total number of districts analyzed) and multiplied by 100.

as socioeconomic status increased. Family background, i.e., education and occupation of the father, was reported as being associated with dropout behavior; parental aspirations for their children's education was also strongly correlated with the student's decision to attend postsecondary educational institutions.

Many studies have demonstrated the importance of the family as a support mechanism. The family should be the primary nurturer, socialization mechanism, and provider of guidance to children. To the extent that families are unable to serve these functions, the overall ability of a community to prosper will be diminished.

The Governor's Task Force on Poverty and Welfare observed that the overrepresentation in poor neighborhoods of a variety of problems raises questions about the relationship between the poverty of a neighborhood and the behavior and values of residents. The Task Force stated that "the lack of opportunities and the isolation of ghetto neighborhoods establishes a vicious circle in which behavior that ultimately proves self-defeating seems both reasonable and rewarding. Young men, for example, who see no legitimate job in their future may see no reason to stay in school and a good reason to become part of the underground economy".

Housing conditions have been shown to be an obstacle to the social support structure of a community. Poor or inadequate housing could contribute to the more economically successful residents of an area moving out of the neighborhood for a better environment. Thus, the neighborhood loses individuals, who may be best able to help repair its social fabric. The loss of such individuals serves to weaken the already thin and fragile network of formal and informal social structures, which provide critical mutual aid and support systems for an area's residents.

Described below are the components of a social need index designed to measure the sufficiency of a community's social support systems. Four equally weighted variables from the 1980 Census were used to construct the index. The variables are:

- percent of children in one parent families;
- percent of occupied housing units with incomplete plumbing;
- percent of households receiving public assistance payments; and
- percent of overcrowded housing units.

Percent of Children in One Parent Families. Single parents tend to have greater difficulty than two parent families in providing children with needed attention, guidance, and basic socialization. A single parent is always "on duty" regarding his/her children. Responsibilities cannot be shared with a spouse, a problem which is further compounded when the number of children being raised is large. Numerous studies have also shown that such single parent families, when headed by a female, are very likely to be in poverty. In households with income below the poverty level, the problems associated with the single parent family structures are magnified since the family head must cope simultaneously with both the demands of child rearing and economic survival. Responsibilities associated with child care can prevent many single parents from working full-time. Since most single-parent families are headed by women and female wages are almost always lower than male wages, families headed by women are much more likely to have income below the poverty level than families headed by men.

The indicator for the percent of children in one parent families was calculated in three steps. First, the number of children in one parent families was divided by the sum of the children in both one and two parent families and then multiplied by 100. Second, district percentages were ranked from low to high. Third, the rankings were then converted into percentile scores.

Percent of Households Receiving Public Assistance Payments. Widespread reliance on public assistance payments is an indicator of the inability of a community's households to support themselves. Residents of communities lacking sufficient economic opportunities or whose level of training prevents access to available job opportunities must often depend on public assistance to generate minimal income levels.

The indicator for the percent of households receiving public assistance payments was computed in three steps. First, the number of households receiving public assistance income payments in a district was divided by the total number of households and then multiplied by 100. Second, district percentages were ranked from low to high. Third, the rankings were then converted into percentile scores.

Percent of Occupied Housing Units With Incomplete Plumbing. Housing units with incomplete plumbing (includes no plumbing facilities, some plumbing facilities, and complete plumbing facilities but used by another household) reflect inadequate housing. For employed residents of a community the lack of adequate and affordable housing may be a compelling reason to move. This condition tends to reduce the number of positive role models in the neighborhood and hurt the social support structure of the community.

The indicator for incomplete plumbing was calculated in three steps. First, the number of occupied housing units with incomplete plumbing in a district was divided by the total number of occupied housing units and then multiplied by 100 to yield a percent. Second, district percentages were ranked from low to high. Third, the rankings were then converted into percentile scores.

Percent of Overcrowded Housing Units. Overcrowding may lead to irritations, tensions, and a variety of health and behavioral problems in the home. Children tend to receive less effective child rearing in an overcrowded home because parents may feel irritable, weary, and harassed. Children in turn may find the home unattractive, noisy, with limited or non-

existent privacy, and with no regular place to study. Under such conditions, children may become inclined to withdraw from the home, and to become more involved in peer groups in which antisocial behavior may be characteristic.

This indicator for overcrowded housing units was calculated in three steps. First, the number of occupied housing units with central plumbing and with 1.01 or more persons per room was divided by the number of occupied housing units with central plumbing and then multiplied by 100 to yield a district percentage. Second, district percentages were ranked from low to high. Third, the rankings were then converted into percentile scores.

Calculation of the Social Need Index. As was previously described, an index of social need is calculated for each district. Social need is measured by summing the percentile scores of the four variables and dividing this sum by four.

Education Need

Education is the key to economic opportunity. A strong educational system is essential for individuals to have a meaningful chance at improving themselves economically. When a strong educational system exists, students will graduate from high school with the skills necessary to get a job or to attend a postsecondary institution.

The index of education need weights equally four data elements from the 1980 Census in order to permit identification of districts with a variety of severe educational problems. The data elements include:

- percent of adults (25+) who did not graduate from high school;
- percent of 16 to 19 year olds who dropped out of high school;
- unemployment rate among high school graduates (not enrolled in school), who are 16 to 19 years old; and,
- percent of 18 to 24 year olds with at least one year of postsecondary education.

Percent of Adults Not Graduating from High School. The percentage of adults (25 years of age and older) who have not graduated from high school is an important indicator of the educational strength of a community. If a high percentage of adults have not graduated from high school, many of these individuals will lack the basic skills needed for stable, long-term employment and consequently little long-term economic improvement will occur. In addition, children may lack successful adult role models that encourage them to complete school.

Lack of a high school diploma could suggest that such individuals either may not place a high value on the importance of education or grew up in an environment which was not conducive to an individual graduating from high school. Even if such individuals do place a high value on education, their fiscal ability to support the school system and educational aspirations of their children may be constrained since nongraduates of high school tend to have low paying jobs. Thus, the tendency of students not to graduate could be passed on to another generation, reinforcing the community's tendency to remain a distressed area.

The indicator for adults who did not graduate from high school was calculated in three steps. First, the number of adults age 25 and older who did not graduate from high school was divided by the number of adults age 25 and older and then multiplied by 100 to yield a district percentage. Second, district percentages were ranked from low to high. Third, the rankings were then converted into percentile scores.

Percent of 16 to 19 Year Olds Not Enrolled in School Who Have Not Graduated. School dropouts have difficulty in finding employment, and are subject to an increased risk of involvement in delinquent or nonconventional social behavior. Communities characterized by high dropout rates lack the skilled labor pool needed to attract business and industrial firms to the area; such communities may also experience increased welfare or dependency costs.

The indicator of 16 to 19 year olds who did not graduate from high school was calculated in three steps. First, the number of nongraduates was divided by the total of 16 to 19 year olds (excluding those in the armed forces) and multiplied by 100 to yield a percentage. Second, district percentages were then ranked from low to high. Third, the rankings were then converted into percentile scores.

Employment Rate for Recent High School Graduates. A low employment rate among recent high school graduates can have important implications for the educational system of a community. A possible factor contributing to the low employment rate is that the recent high school graduates lack the skills necessary to obtain employment. If high school graduates lack such skills, the educational system has failed to fulfill a vital aspect of its mission.

A second factor that could contribute to a low employment rate among recent high school graduates is that jobs do not exist for recent graduates because of a general lack of economic activity in the area. If, indeed, the low employment rate is due to limited employment opportunities, high school graduates possessing basic skills will be inclined to leave the community in search of work. This out-migration of skilled individuals makes it difficult for a community to attract new business and industrial firms.

Observing that recent high school graduates are often unemployed, some students currently in school may be inclined to question the importance of education and drop out of school. Such a decision would increase the dropout rate in a commu-

nity thereby weakening its educational system, and would over time intensify its economic difficulties.

A high employment rate for recent high school graduates indicates a community, despite any other problems it may face, possesses some economic strength. Particularly in distressed areas, high employment rates for recent high school graduates may motivate students to remain in high school and graduate. By staying in school these students increase their probability of securing employment and will help strengthen the economic and educational systems of a community.

The indicator for the employment rate of recent high school graduates was calculated in three steps. First, the number of employed high school graduates (16 to 19 years old) was divided by the sum of employed and unemployed 16 to 19 year olds who had graduated from high school but were not attending school at the time of the 1980 Census, and then multiplied by 100 to yield a percentage. Second, district percentages were ranked from high to low. Third, the rankings were then converted into percentile scores.

Percent of 18 to 24 Year Olds With At Least One Year of Postsecondary Education. The indicators of educational need described above are a partial reflection of the extent to which a community's residents possess the basic skills needed for employment. However, for a community to prosper economically, a work force should possess not only basic skills but also more advanced skills needed for entry into managerial, professional, and technical positions. These advanced skills are needed so that a community can take advantage of the profound shifts in the economy that have occurred in the nation and the State in recent years. Many individuals acquire such advanced skills through postsecondary education.

The percentage of 18 to 24 year olds with some postsecondary educational experience would appear to be an indicator of a community's ability to overcome economic difficulty. A high percentage of such individuals indicates the existence of an important resource which may over time help reduce the negative effects of other indicators and promote the economic and social strength of a community. A low percentage of individuals with postsecondary educational experience, on the other hand, indicates that a distressed community will continue to experience difficulty in its efforts to overcome obstacles and promote the economic prosperity of its residents.

In a community in which a relatively low percentage of its 18 to 24 year olds have attended college, schools may be producing graduates who either lack the academic skills required for postsecondary education or the motivation to successfully attend college and to acquire the skills which would allow them to live more economically productive lives. Even if the schools produce graduates with the desire and capability to enter postsecondary education, the lack of job opportunities commensurate with their education may ultimately result in individuals deciding to relocate to another community upon completion of their postsecondary education. Thus, a distressed community may lose many talented individuals with the skills needed to improve the local economy.

In the 1980s, for a community to enjoy substantial economic prosperity, the existence of a work force with a relatively high level of postsecondary experience is almost an absolute necessity. Postsecondary education in New York State has increased dramatically over the past four decades for a variety of reasons, some of the more important reasons, including: 1) the greater affluence of many families (a sign of economic prosperity); 2) the greater availability of public postsecondary education (the expansion of the State University of New York and the City University of New York, particularly at the community college level); and, 3) the increasing emphasis given to providing financial aid to needy students.

The indicator for 18 to 24 year olds with at least one year of postsecondary experience was calculated in three steps. First, the number of 18 to 24 year olds who had one or more years of college was divided by the total number of 18 to 24 year olds, and then multiplied by 100 to yield a percentage. Second, district percentages were ranked form high to low. Third, the rankings were then converted into percentile scores.

Calculation of the Education Need Index. As was previously described, an index of education need is calculated for each district. Education need is measured by summing the percentile scores of the four variables and dividing this sum by four.

III.

Preliminary Results of the Methodology to Identify Distressed Areas

To identify school districts with the greatest degree of distress, a composite index of distress was calculated.[1] This index was based on summing the three need indices and dividing by three. For this preliminary analysis, school districts as they existed in 1980 (747 districts) were analyzed. The districts were grouped into six types. The six types were based on classifications of the New York State Education Department's Information Center on Education. The types were: 1) New York City community school districts (32 districts); 2) Other Big Five districts (Buffalo, Rochester, Syracuse and Yonkers); 3)small city districts (57 districts); 4) downstate suburban districts (174 districts); 5) upstate suburban districts (186 districts); and 6) rural districts (294 districts)[2].

The methodology resulted in a statewide arithmetic average of approximately 50 for each of the individual variables, the three need dimensions and for the index of distress[3]. A district with need or distress of higher than 50, therefore, had greater than average need or distress.

Described below are the results of the identification methodology. Results are discussed in terms of: a) contrasting the tendency among the six types to have districts with above average distress, economic need, social need, and education need indices; b) a general description of distress scores within each of the six types; and, c) distress scores and districts with at least one school building, which has been required to complete a comprehensive school improvement plan.

Distress

Based on the methodology previously described, 406 (54.4 percent) of the 747 districts were identified as having a distress index greater than the statewide average (50.0). Community distress varied widely among the types of districts. The average distress score for the six groups ranged from 29.76 (downstate suburban districts) to 74.56 (New York City community school districts). Four of the six groups (New York City, Other Big Five, rural and small cities) had an average distress score which exceeded the State average, while suburban districts tended to have distress scores below the State average. The average distress index for each group of districts was:

New York City	74.56
Other Big Five	65.31
Rural	61.17
Small Cities	58.13
Upstate Suburban	44.50
Downstate Suburban	29.76

Table 1 shows that the New York community school districts, Other Big Five, rural and small city districts were more likely to have distress scores of over 50.0, than were suburban districts. For example, while the table shows that 54.9 percent of the school districts had a distress index greater than the State average:

- 100.0 percent of the other Big Five districts had a distress index higher than the State average;
- 90.6 percent of the New York City community school districts had a distress index higher than the State average;
- 78.9 percent of the rural school districts had a distress index higher than the State average; and,
- 78.9 percent of the small city districts had a distress index higher than the State average.

[1] Hereafter, this index will frequently be referred to as a distress score or distress index.

[2] The Information Center on Education refers to this grouping of districts as nonsuburban rather than rural, since the group contains some districts from counties in a Standard Metropolitan Statistical Area (SMSA). For example, some districts from counties such as Dutchess and Orange are included in this grouping. However, since the vast majority of such districts in this grouping are from rural areas, this report used the term rural to describe this grouping.

[3] The exact mean was 50.07.

TABLE 1

RESULTS OF DISTRESS INDEX, BY DISTRICT TYPE

District Type	Number of Districts (A)	Percent of All Districts (B)	Districts with Distress Index of 50 or Higher (C)	Percent of District Type with Index of 50 or Higher (D)	Percent of All Districts with Index of 50 or Higher (E)	Concentration Ratio: Col. E/ Col. B (F)
New York City	32	4.3%	29	90.6%	7.1%	1.65
Other Big 5	4	0.5	4	100.0	1.0	2.00
Small Cities	57	7.6	45	78.9	11.1	1.46
Upstate Suburban	186	24.9	72	38.7	17.7	0.71
Downstate Suburban	174	23.3	24	13.8	5.9	0.25
Rural	294	39.4	232	78.9	57.1	1.45
STATE	747	100.0%	406	54.4%	100.0%	

Conversely, Table 1 shows that suburban districts were far less likely to have high distress scores, specifically only:

- 38.7 percent of the upstate suburban districts had a distress index higher than the State average: and,
- 13.8 percent of the downstate suburban districts had a distress index higher than the State average.

An alternative way of evaluating the relative concentration of community distress within each of the six district groupings is to compute a simple concentration ratio. That is, by comparing the percentage of districts statewide falling into a particular group with the percentage of districts within that group having a distress index greater than a specified level (e.g. the state average), it is possible to determine whether distress is disproportionally distributed among the various types of districts[10]. If distress is in fact distributed randomly, then these two percentages should be approximately equal, i.e. the concentration ratio should approximate 1.0. Once again, Table 1 indicates that distress is not spread randomly across district types. Table 1 shows that:

- New York City's 32 community districts constituted 4.3 percent of the State's districts, 7.1 percent of the districts with a distress index above 50, and had a concentration ratio of 1.65;
- Other Big Five districts constituted 0.5 percent of the State's districts, 1.0 percent of the districts with a distress index above 50, and had a concentration ratio of 2.00;
- small city districts constituted 7.6 percent of the State's districts, 11.1 percent of the districts with a distress index above 50, and had a concentration ratio of 1.46;
- rural districts constituted 39.4 percent of the State's districts, 57.1 percent of the districts with a distress index above 50, and had a concentration ratio of 1.45;
- upstate suburban districts constituted 24.9 percent of the State's districts, 17.7 percent of the districts with a distress index above 50, and had a concentration index of 0.71; and,
- downstate suburban districts constituted 23.3 percent of the State's districts, 5.9 percent of the districts with a distress index above 50, and had a concentration ratio of only 0.25.

[10] Similar results would be obtained if the percentage of districts with a distress score over a designated value were divided by the percentage of the State's districts with a distress score above the stated value.

Economic, Social, and Education Need

The results of the economic, social, and education need indices were analyzed by the six types of districts. Table 2 summarizes these data for each of the six district types. On average, urban and rural districts tended to have greater economic, social, and educational need than did suburban districts.

Economic Need. The methodology resulted in 51.9 percent of the State's districts having an economic need index of at least 50.0 (the State average). Districts from New York City, Other Big Five, rural areas, and small cities were the most likely to have high levels of economic need.

Table 2 shows that districts with economic need scores above 50 included:

- 78.2 percent of the rural districts;
- 78.1 percent of the New York City community school districts;
- 75.0 percent of the Other Big Five districts; and
- 71.9 percent of the small city districts

Suburban districts were less likely to be identified as having economic need above the State average. Only 9.8 percent of the downstate districts and 38.7 percent of the upstate suburban districts had an economic need index above the State average.

Social Need. Application of the methodology resulted in 52.9 percent of the State's districts having a social need index of at least 50. Districts from urban areas (New York City, Other Big Five, and small cities) were particularly likely to be identified as having high social need. Cities, therefore, might be characterized generally as having high economic need but even greater social need. Although the percentage of rural districts with social need scores above 50 was lower than in the urban groups, rural districts also tended to have high social need scores. Suburban districts, however, were less likely to have above average social need scores.

Table 2 shows that districts with a social need index of 50 or more included: 100.0 percent of the Other Big Five districts; 96.9 percent of the New York City community school districts; 91.2 percent of the small city districts; 68.7 percent of the rural districts; 37.6 percent of the upstate suburban districts; and 20.7 percent of the downstate suburban districts. The percentages for each group are noticeably different from the 52.9 percent of the State's districts with a social need score of 50 or more.

Education Need. The methodology resulted in 53.0 percent of the State's districts having an education need index of at least 50. Districts from rural areas, New York City, Other Big Five, and small cities were the most likely to have education need scores above 50. Suburban districts were less likely to have education need scores above 50, although the upstate suburban districts were more likely than downstate suburban districts to have high education need scores.

Table 2 shows that districts with an education need index of 50.0 or more included: 75.0 percent of the New York City community school districts; 73.5 percent of the rural districts; 68.4 percent of the small city districts; 50.0 percent of the Other Big Five districts; 46.8 percent of the upstate suburban districts; and 16.1 percent of the downstate suburban districts.

Only the Other Big Five and upstate suburban districts had percentages which approximated the 53.0 percent of the State's districts with an education need index of 50 or more.

TABLE 2

RESULTS OF THREE NEED INDICES, BY DISTRICT TYPE

Index	New York City[a] (n=32)	Other Big 5 (n=4)	Small City (n=57)	Downstate Suburbs (n=174)	Upstate Suburbs (n=186)	Rural (n=294)	State (n=747)
ECONOMIC NEED:							
Percent of Districts within District Type with Index of 50 or More	78.1%	75.0%	71.9%	9.8%	38.7%	78.2%	51.9%
Percent of the State's Districts Represented by District Type	4.3	0.5	7.6	23.3	24.9	39.4	100.0
Percent of Districts with Index of 50 or More	6.4	0.8	10.6	4.4	18.6	59.3	100.0
SOCIAL NEED:							
Percent of Districts within District Type with Index of 50 or More	96.9%	100.0%	91.2%	20.7%	37.6%	68.7%	52.9%
Percent of the State's Districts Represented by District Type	4.3	0.5	7.6	23.3	24.9	39.4	100.0
Percent of Districts with Index of 50 or More	7.8	1.0	13.2	9.1	17.7	51.1	100.0
EDUCATIONAL NEED:							
Percent of Districts within District Type with Index of 50 or More	75.0%	50.0%	68.4%	16.1%	46.8%	73.5%	53.0%
Percent of the State's Districts Represented by District Type	4.3	0.5	7.6	23.3	24.9	39.4	100.0
Percent of Districts with Index of 50 or More	6.1	0.5	9.8	7.1	22.0	54.5	100.0

[a] New York City analyzed as 32 community school districts.

Results by Type of District

Described below are general results of the identification methodology for each of the six types of districts. The analysis shows that economic, social, and educational need tend to the concentrated in urban and rural areas.

New York City Community School Districts. Most of the 32 New York City community school districts had high distress scores. Among these districts, for example:

- the average distress index was 74.56 (compared to a State average of 50);
- of the 10 districts with the highest distress scores in the State, 9 were New York City community school districts; and,
- 15 of the 37 districts with the highest distress indices in the State were New York City community school districts.
- 29 (90.6 percent) of the community school districts had a distress score which was higher than the State average.

Table 3 gives the index value for each of the three need factors and the index value for distress for the community school districts of New York City.

While New York City community school districts tended to have high scores on each need dimension, social need was particularly high. The mean score for each need dimension for the 32 community school districts was:

- economic – 68.15;
- social – 89.31; and
- education – 66.23.

Other Big Five Districts. All four of the other Big 5 districts (100 percent) had a distress score which exceeded 50. Composite need indices ranged from 54.47 to 74.73 for these districts. Other Big Five districts had an average distress score of 65.31 as compared to a State average of 50. Buffalo's distress index (74.73) was slightly higher than the New York City community school district mean (74.56). Rochester's distress index (71.35) was approximately 3 points lower than the New York City community school district mean. The index of distress for each of the four districts was:

Buffalo	74.73
Rochester	71.35
Syracuse	60.70
Yonkers	54.47

The pattern of need among these districts was on average similar to New York City. Economic and educational need were similar in value, while social need was noticeably higher. The mean index for each of the three need dimensions was:

- economic – 59.71;
- social – 78.47; and,
- educational – 57.76.

Small City Districts. Index values for distress ranged from 12.56 to 79.46 among the small cities. Nine of the small city districts had a distress index higher than 70.0 and 45 (78.9 percent) of the small cities had a distress score higher than the State average. The average distress score for small cities was 58.13 as compared to a State average of 50. The 10 small city districts with the highest distress scores were:

Poughkeepsie	79.46
Rensselaer	74.67
Ogdensburg	72.66
Gloversville	72.55
Lackawanna	71.92
Fulton	71.60
Port Jervis	71.33
Utica	70.63
Newburgh	70.28
Niagara Falls	69.62

Small cities on average tended to have need profiles similar to the Big Five Cities, i.e., patterns of high economic and educational need and even higher social need. The mean index of the small city districts for the three need dimensions was:

- economic – 56.09;
- social – 63.73; and,
- educational – 54.58.

Downstate Suburban Districts. In general, downstate suburbs could be characterized as having the least amount of distress among the six groups of school districts, although some districts were identified as having a high level of distress. Only twenty four (13.8 percent) of the downstate suburban districts had a distress index of greater than 50. Index values ranged from 3.92 to 73.24 for districts in this classification. The average distress score for downstate suburban districts was 29.76 as compared to a State average of 50. The 10 districts with the highest distress scores among downstate suburban districts were:

William Floyd	73.24
Roosevelt	71.30
Wyandanch	68.36
Hempstead	68.30
Central Islip	66.85
West Manor	64.85
Greenport	62.64
South County	62.80
Riverhead	61.99
Copiague	61.48

Downstate suburbs on average had consistently low scores across the three need dimensions. The mean index for each dimension was:

- economic – 26.52;
- social – 33.31; and,
- education – 29.45.

TABLE 3

INDIVIDUAL INDICES AND COMPOSITE INDEX OF NEED
FOR NEW YORK CITY COMMUNITY SCHOOL DISTRICTS
BASED ON 12 VARIABLES

Community School District	Index of Economic Need	Index of Social Need	Index of Education Need	Composite Index of Need
1	81.19	96.05	71.92	83.05
2	36.04	78.08	30.52	48.22
3	51.47	96.32	45.05	64.28
4	92.97	97.86	87.88	92.90
5	91.93	98.56	81.29	90.60
6	79.25	97.89	71.62	82.92
7	88.29	99.03	92.30	93.21
8	78.65	95.18	73.19	82.34
9	90.66	97.62	91.37	93.22
10	70.48	95.48	70.05	78.67
11	51.97	87.68	57.23	65.63
12	87.65	96.72	79.02	87.80
13	77.64	97.26	73.73	82.88
14	88.86	97.16	88.25	91.42
15	69.85	95.35	71.79	78.99
16	96.72	94.68	85.94	92.45
17	87.05	95.65	75.97	86.22
18	62.25	90.33	47.79	66.79
19	89.46	96.69	83.77	89.97
20	60.64	83.37	61.08	68.36
21	66.43	89.02	63.96	73.14
22	48.09	81.56	47.62	59.09
23	92.14	97.86	91.57	93.85
24	50.47	86.55	62.65	66.56
25	33.17	70.35	35.34	46.29
26	18.44	36.95	24.67	26.68
27	59.94	87.42	63.35	70.24
28	47.29	84.57	48.63	60.16
29	49.90	82.60	53.18	61.89
30	54.79	87.38	58.57	66.91
31	37.15	67.77	45.25	50.06
32	90.03	98.86	84.67	91.19

Upstate Suburban Districts. On average, upstate suburban districts had less community distress than other districts outside the metropolitan area of New York City. Index values for distress among upstate suburban districts ranged from 4.31 to 93.62. The average distress score for upstate suburban districts was 44.50 as compared to a State average of 50. Particular districts, however, showed substantial amounts of above average distress. For example, the Sylvan-Verona district had the second highest distress score in the State. The 10 upstate suburban districts with the highest distress scores were:

Sylvan-Verona	93.62
Red Creek	83.53
De Ruyter	82.23
North Rose Wolcot	81.31
Mount Morris	80.57
Sodus	80.27
Camden	78.98
Brookfield	78.88
Altmar Parish	77.00
Hannibal	75.20

The average need of upstate suburban districts tended to be relatively consistent across the three dimensions. The mean index for each dimension was:

- economic – 43.35;
- social – 41.93; and,
- education – 48.21.

Rural Districts. Although rural districts had great variation in the measurement of distress (as index values ranged from 11.98 to 89.84), districts classified as rural were particularly likely to have high index scores. For example, rural districts:

- had an average distress score[11] of 61.17 as compared to a State average of 50; and,
- were 57.1 percent of the 406 districts in the State with a distress index of 50 or more.

Rural districts were likely to have above average distress scores, as 78.9 percent of the districts in this group had a distress score greater than the State average. The 10 rural districts with the highest distress scores were:

Northern Adirondack	89.84
Jasper[12]	87.95
Salmon River	86.91
Harrisville	86.39
Warrensburg	86.12
Brushton-Moira	85.89
Addison	85.81
North Warren	85.69
Knox Memorial[12]	85.49
Moriah	84.96

Rural schools tended on average to have consistently high need on each dimension. The mean index for each dimension was:

- economic – 64.99;
- social – 57.83; and,
- education – 60.71.

Distress and Schools in Need of Improvement

In recent years the State Education Department has identified schools required to complete comprehensive school improvement plans designed to improve academic performance. The identified buildings are located in 18 school districts (with New York City counted as one district). Of the 17 districts located outside of New York City, 16 districts had a distress index greater than 50.0. These 16 districts and their index of distress are:

Addison	85.81
Bradford	79.50
Buffalo	74.73
Lackawanna	71.92
Rochester	71.35
Roosevelt	71.30
Utica	70.63
Niagara Falls	69.62
Hempstead	68.30
Troy	63.50
Syracuse	60.70
Schenectady	60.68
Port Chester	58.04
Kingston	57.71
Yonkers	54.47
Albany	53.40

[11] It should be noted that this grouping did contain districts from counties within Standard Metropolitan Statistical Areas. If such districts had been placed in another type (upstate suburban), average scores for rural districts would have tended to be even higher.

[12] District has participated in a reorganization since 1980.

IV.

Next Steps

The identification of community renewal areas poses a variety of methodological problems. It also poses important questions about ways of displaying such information. Since economic or social distress is not a randomly distributed phenomenon, but is often geographically concentrated, the use of graphic mapping techniques designed to permit an immediate visualization of the geographic dispersion of the problem was investigated. The results of this investigation are provided in Appendix B, which consists of five charts and the data on which the charts were based. Chart 1 shows the 32 community school districts of New York City and Charts 2 through 5 represent a concrete application of a mapping technique for the community school districts. The charts and accompanying data are ordered according to economic need (Chart 2), social need (Chart 3), education need (Chart 4), and a composite index of overall distress (Chart 5). It should be noted that these maps are New York City referenced. Some of the community school districts with a low level of need for New York City would be indicated as areas with relatively high need, if the maps were based on State norms.

As noted, the charts permit a visual understanding of the geographic location and concentration of community distress. Distress obviously is not found on a geographically random basis. Rather, the most distressed community school districts are located in the same geographic areas of New York City. Community school districts with moderately high levels of distress tend to be immediately adjacent to the districts with the greatest distress.

The Department is presently exploring the possibility of developing computerized mapping techniques which portray the distress of the other school districts in the State. Due to the large number of school districts and the available software programs, it may prove unfeasible to use a computer to map the entire State at one time with the detail shown in the New York City charts. Small districts would prove visually difficult to identify. However, the detailed mapping of regional areas of school districts within such areas appears feasible.

Appendix A:

Discussion of the Identification Methodology

In developing the overall distress index, equal weighting was to be given to: 1) each of the need dimensions; and, 2) each of the individual variables (there were 12 variables used). Equal weighting of variables and need dimensions was desirable so that only communities with a severe combination of problems would receive high scores for need and distress. If the variables were not equally weighted, a need dimension or the distress index could be dominated by only one or two variables.

Initially, an index for each variable was created, which was based upon the relationship between a district's value for a specified variable and the value of the median school district. In most cases, the district value was divided by the State median. for three variables (income per capita, postsecondary experience of 18 to 24 years old and employment rate for 16 to 19 years old high school graduates who were not enrolled in school) the State median was divided by the district value. This result was multiplied by 100 to create an index. Districts with a value below the State median would have an index of less than 100, while districts with a value above the median district would have an index which was greater than 100.

Appendix Table A-1 provides the minimum and maximum indices for each variable. The table shows that the distributional pattern of a variable could effectively result in the differential weighting of variables. For example, having the highest index in the State for incomplete plumbing (943.84) was more than four and one-half time more important than having the highest district index for the percent of persons in poverty (200.44).

Such a situation was unacceptable as one variable could dominate the results of an individual need dimension and consequently the distress index. To ensure the equal weighting of variables, a change in methodology was needed. It was decided that the most appropriate methodology would be to convert the district values of the individual variables into percentile scores. This was done by ranking (from low to high or from high to low) the values and dividing by the total number of districts (747). Percentile scores ranged from 0.13 to 100. The median district had a percentile score of 50.07 (the result of 374 divided by 747 and multiplied by 100)[11] and the State mean[12] or average was also 50.07.

For each need dimension, the percentile scores of appropriate variables would be summed and the result divided by four. The composite index of distress was computed by summing the score of the three need dimensions and dividing the result by three.

As a result of this procedure, the average problem level for variable need dimension or composite index of distress was approximately 50. Appendix Table A-2 shows that the mean for each variable, each need dimension and the composite index of distress was 50.07. Standard deviations, minimums, and maximum values were approximately equal.

[11] For the variables which were ranked from high to low, districts with a value of 0.00 percent were treated as if their value was that of the district with the next highest percentage.

[12] The sum of the percentile scores of all districts divided by 747.

APPENDIX TABLE A-1

COMPARISION OF SELECTED STATISTICS FOR INDICES
BASED ON STATE MEDIAN

Data Item	Mean[a]	Standard Deviation	Minimum Value	Maximum Value
Income per Capita	98.36	25.73	27.94	200.44
Unemployment Rate	109.37	51.15	0.00	451.39
Long-Term Unemployment	101.38	21.65	0.00	237.42
Poverty Rate	106.94	67.40	0.00	491.43
Economic Need	104.01	35.01	16.25	250.80
Children in One Parent Families	116.96	72.45	0.00	561.38
Public Assistance Households	115.60	81.80	0.00	699.49
Incomplete Plumbing	121.92	105.82	0.00	943.84
Overcrowding	123.61	101.28	0.00	793.10
Social Need	119.52	73.14	0.00	588.82
Dropout Rate (16 to 19 year olds)	110.81	75.89	0.00	702.86
Non-Graduates of High School (25 years and older)	96.42	29.81	17.09	209.50
Employment Rate High School Graduates (16 to 19 years olds)	117.50	73.05	40.05	714.25
Post Secondary Experience (18 to 24 year olds)	114.48	63.78	84.96	509.76
Education Need	107.41	38.07	25.29	328.01
Distress Index	110.32	43.45	17.62	353.68

[a] The sum of all values divided by 747.

APPENDIX TABLE A-2

COMPARISION OF SELECTED STATISTICS FOR INDICES
BASED ON PERCENTILE SCORES

Data Item	Mean[a]	Standard Deviation	Minimum Value[b]	Maximum Value[c]
Income per Capita	50.07	28.89	0.13	100.00
Unemployment Rate	50.07	28.89	0.20	100.00
Long-Term Unemployment	50.07	28.89	0.13	100.00
Poverty Rate	50.07	28.89	0.20	100.00
Economic Need	50.07	24.87	0.57	97.96
Children in One Parent Families	50.07	28.89	0.33	100.00
Public Assistance Households	50.07	28.89	0.27	100.00
Incomplete Plumbing	50.07	28.89	2.14	100.00
Overcrowding	50.07	28.89	0.87	100.00
Social Need	50.07	22.43	0.90	99.03
Dropout Rate (16 to 19 year olds)	50.07	28.89	1.20	100.00
Non-Graduates of High School (25 years and older)	50.07	28.89	0.13	100.00
Employment Rate High School Graduates (16 to 19 years olds)	50.07	28.89	0.13	99.80
Postsecondary Experience (18 to 24 year olds)	50.07	28.86	5.49	99.13
Education Need	50.07	21.94	2.11	98.19
Distress Index	50.07	21.12	3.92	93.85

a Sum of all values divided by 747.

b A minimum of greater than 0.13 for a census variable indicates more than one district shared the same value.

c A maximum of less than 100.00 for a census variable indicates more than one district shared the same value.

Appendix B:

Mapping Levels of Distress Among New York City Community School Districts

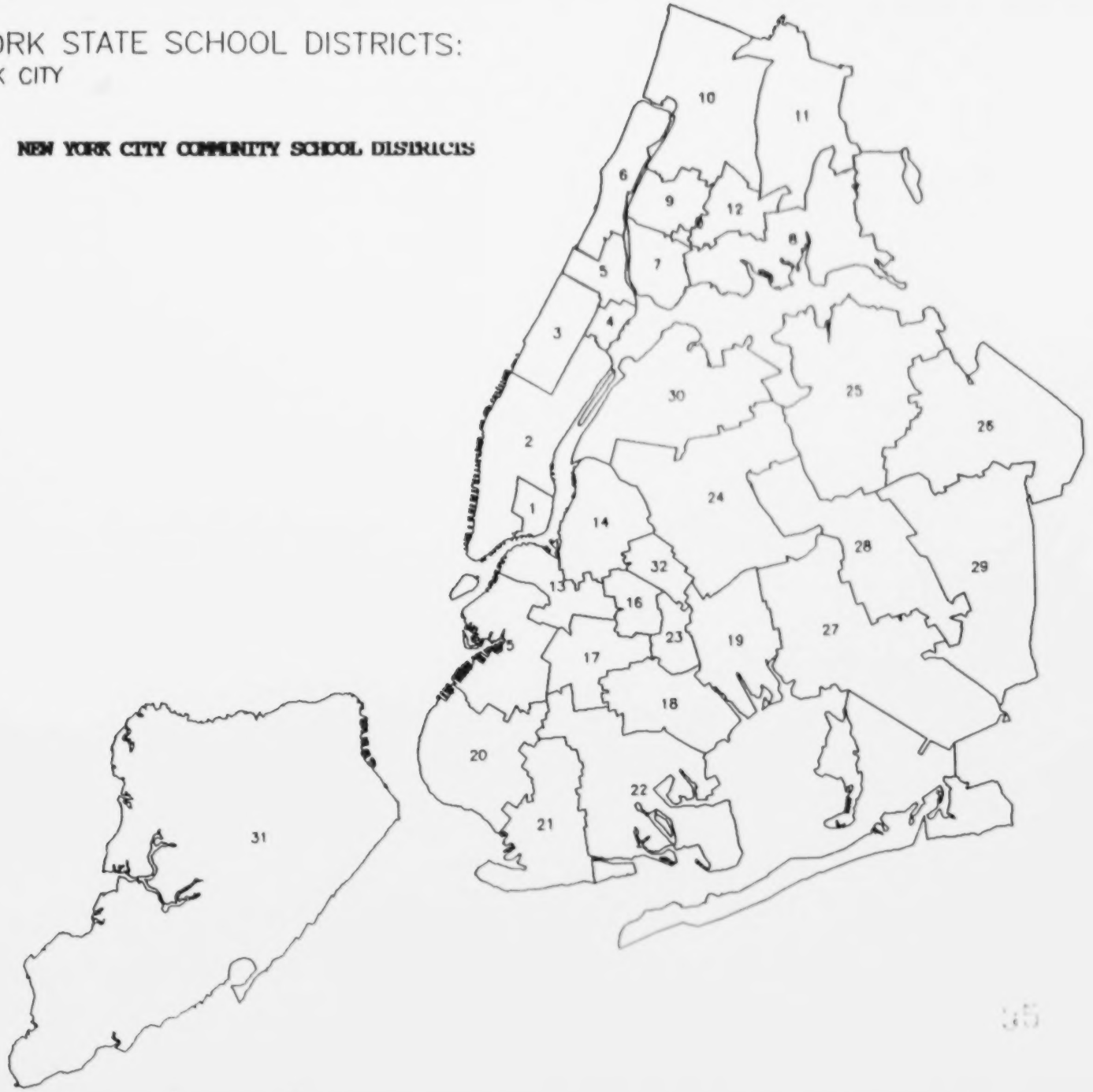
As noted in this report, the use of graphic mapping techniques to visualize the geographic dispersion of distress in New York City was investigated. Five charts or maps concerning New York City community school districts were developed. These maps are referenced against New York City need. The maps would be different if need were referenced against State criteria. The charts are:

- Chart 1 shows the community school districts of New York City;
- Chart 2 shows the geographic dispersion of economic need among the community school districts;
- Chart 3 shows the geographic dispersion of social need among the community school districts;
- Chart 4 shows the geographic dispersion of educational need among the community school districts;
- Chart 5 shows the geographic dispersion of distress among the community school districts.

The data on which charts 2 through 5 were based are also provided.

NEW YORK STATE SCHOOL DISTRICTS:
NEW YORK CITY

CHART 1: NEW YORK CITY COMMUNITY SCHOOL DISTRICTS



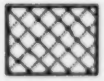
NEW YORK STATE SCHOOL DISTRICTS:

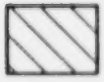
NEW YORK CITY

INDEX OF ECONOMIC NEED

CHART 2: INDEX OF ECONOMIC NEED

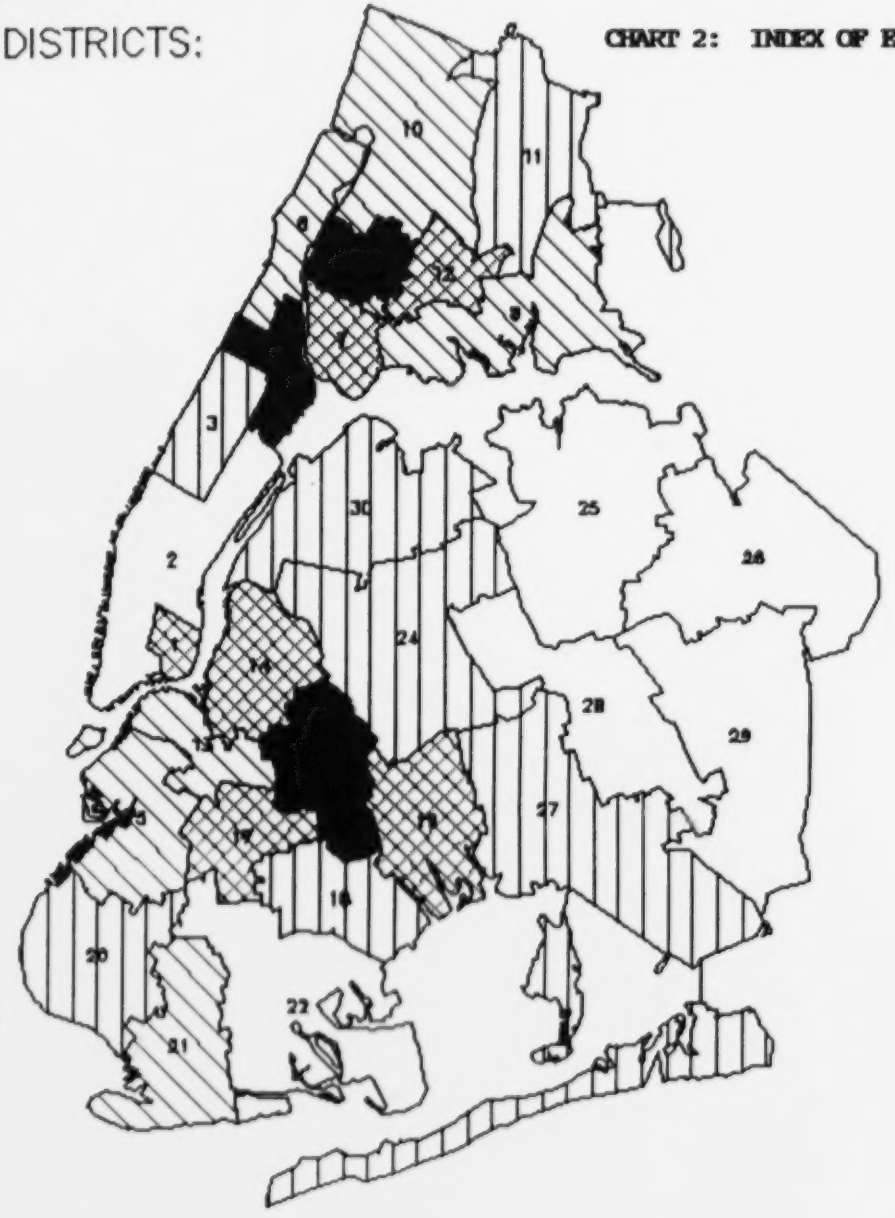
89.47 to 96.72


79.26 to 89.46


62.26 to 79.25

49.91 to 62.25

18.44 to 49.90



INDIVIDUAL VALUES AND INDICES USED TO DEVELOP ECONOMIC INDEX OF NEED

Community	Income/Capita		Unemployment Rate		Long-term Unemployed as a % of Unemployed		% of Persons Below Poverty	
School District	Value	Index[a]	Value	Index[a]	Value	Index[a]	Value	Index[a]
1	$ 5,008	90.50	10.20%	79.65	43.58%	55.82	34.94%	98.80
2	16,082	1.20	5.21	24.77	42.33	51.41	12.17	66.80
3	11,416	6.16	7.49	53.01	42.90	53.15	19.97	93.57
4	3,646	99.33	12.83	89.83	50.41	83.27	40.93	99.46
5	4,692	94.65	12.80	89.56	50.64	84.34	36.90	99.20
6	5,202	85.68	9.95	78.31	43.37	55.02	27.38	97.99
7	3,336	99.60	14.85	95.18	44.18	58.63	44.49	99.73
8	5,269	84.20	8.80	68.01	45.40	65.60	23.45	96.79
9	3,545	99.46	13.96	93.04	46.60	70.28	45.31	99.87
10	6,115	59.44	8.58	64.66	44.38	59.71	27.43	98.13
11	6,731	42.70	6.52	39.76	44.71	61.71	11.77	63.72
12	4,158	98.26	11.11	84.87	46.06	68.54	36.40	98.93
13	6,109	59.84	10.57	81.53	46.62	70.68	32.40	98.53
14	3,990	98.80	11.20	85.54	47.21	72.02	36.65	99.06
15	6,055	61.71	8.55	63.99	43.61	56.63	23.55	97.05
16	3,880	99.20	14.05	93.57	57.27	94.78	39.26	99.33
17	4,808	93.31	10.82	82.73	47.67	73.90	28.18	98.26
18	6,320	53.41	7.31	51.54	45.62	66.53	13.99	77.51
19	4,104	98.53	11.37	86.61	47.69	74.03	32.83	98.66
20	6,774	41.23	6.85	44.98	48.11	75.64	14.65	80.72
21	6,564	46.59	7.99	58.37	47.98	75.10	15.84	85.68
22	7,503	28.65	6.41	37.75	44.21	58.90	12.19	67.07
23	3,307	99.87	16.03	97.19	47.02	71.89	43.84	99.60
24	6,798	40.83	6.64	41.23	42.61	52.21	12.23	67.60
25	8,468	18.88	5.26	25.44	42.31	51.27	7.42	37.08
26	10,188	9.37	4.22	13.39	39.09	34.00	4.26	17.00
27	6,600	45.78	6.78	43.37	46.62	70.55	14.47	80.05
28	8,415	19.41	6.80	44.04	43.59	56.09	12.64	69.61
29	6,948	37.88	6.92	46.32	44.33	59.30	10.43	56.09
30	6,832	40.56	6.72	42.30	43.65	57.03	14.31	79.25
31	7,576	28.11	5.29	26.51	42.70	52.74	8.25	41.23
32	3,200	100.00	14.68	94.78	45.29	65.33	47.52	100.00
State Median	$ 6,414	50.07	7.20%	50.07	42.12%	50.07	9.67%	50.07

[a] Index is the percentile score of a community school district.

NEW YORK STATE SCHOOL DISTRICTS:

NEW YORK CITY
INDEX OF SOCIAL NEED

CHART 3: INDEX OF SOCIAL NEED

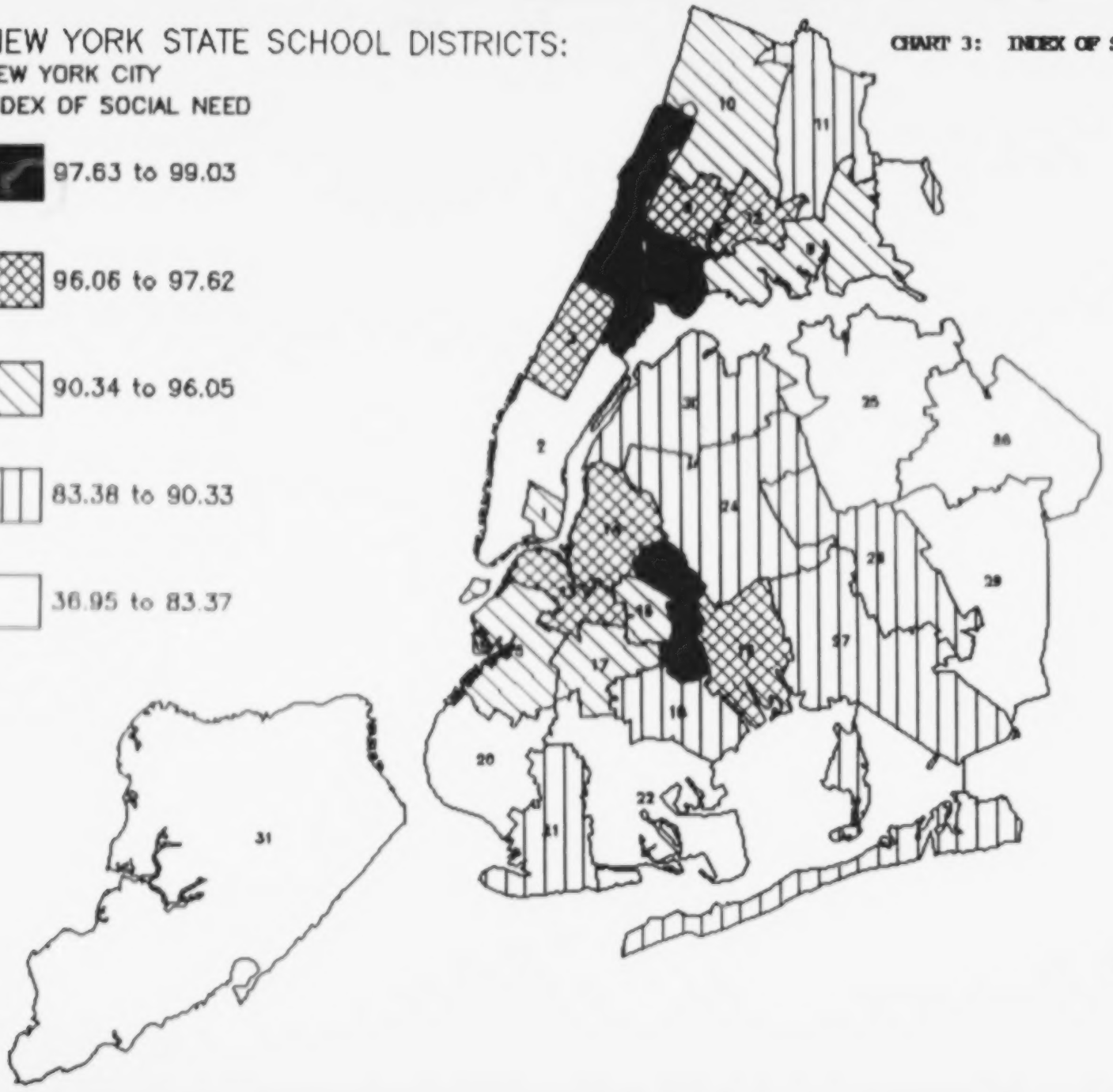
97.63 to 99.03

96.06 to 97.62

90.34 to 96.05

83.38 to 90.33

36.95 to 83.37



INDIVIDUAL VALUES AND INDICES USED TO DEVELOP SOCIAL INDEX OF NEED

Community School District	% Children in One Parent Families		% of Households on Public Assistance		% of Housing Units with Incomplete Plumbing		% of Housing Units with 1.01 or More Persons Per Room	
	Value	Index[a]	Value	Index[a]	Value	Index[a]	Value	Index[a]
1	47.49%	98.39	22.57%	98.53	3.93%	88.62	10.75%	98.66
2	24.32	93.44	4.54	35.88	4.04	89.29	5.09	93.71
3	42.63	97.86	11.82	93.98	7.19	98.53	5.57	94.91
4	58.60	99.20	38.93	99.60	4.64	93.04	13.30	99.60
5	60.44	99.46	29.34	99.06	6.82	98.26	8.57	97.46
6	46.59	98.26	19.09	97.99	5.78	96.92	10.27	98.39
7	59.55	99.33	39.36	99.87	5.95	97.05	15.61	99.87
8	39.65	97.72	22.35	98.39	3.75	86.48	10.05	98.13
9	66.02	100.00	39.38	100.00	4.23	90.50	15.78	100.00
10	49.89	98.66	21.49	98.26	3.76	86.75	10.13	98.26
11	28.35	95.18	10.40	89.69	2.53	71.35	5.34	94.51
12	56.05	98.93	31.31	99.20	4.14	89.96	12.29	98.80
13	58.29	99.06	24.31	98.66	4.71	93.57	8.83	97.72
14	37.68	97.46	24.99	98.80	4.70	93.44	12.30	98.93
15	36.70	97.05	18.16	97.72	4.13	89.83	7.01	96.79
16	62.47	99.73	33.75	99.33	3.18	81.12	10.69	98.53
17	51.80	98.80	19.15	98.13	3.65	86.21	13.28	99.46
18	28.60	95.45	10.78	91.03	2.84	76.97	8.83	97.86
19	48.85	98.53	26.79	98.93	4.15	90.23	12.35	99.06
20	18.70	85.14	10.21	88.89	2.24	66.40	4.87	93.04
21	23.52	92.37	12.38	95.05	2.80	76.44	4.75	92.24
22	23.36	92.10	8.09	76.31	2.11	63.05	5.55	94.78
23	62.89	99.87	38.69	99.46	4.53	92.37	13.99	99.73
24	20.59	89.16	8.72	81.39	2.89	78.05	8.72	97.59
25	14.90	73.36	5.45	47.79	2.17	65.19	5.57	95.05
26	10.72	40.03	3.67	23.16	1.00	32.53	2.06	52.07
27	26.92	94.11	10.98	91.83	2.35	68.54	5.76	95.18
28	27.62	94.65	8.59	80.46	2.25	66.67	6.60	96.52
29	23.11	91.57	10.02	87.82	1.81	54.35	6.71	96.65
30	23.57	92.50	9.96	87.55	2.57	72.16	7.78	97.32
31	14.58	71.08	7.21	68.54	1.73	52.07	3.19	79.38
32	61.93	99.60	39.22	99.73	5.71	96.79	13.26	99.33
State Median	11.76%	50.07	5.63%	50.07	1.63%	50.07	1.99%	50.07

[a] Percentile score of a community school district.

NEW YORK STATE SCHOOL DISTRICTS:

NEW YORK CITY

INDEX OF EDUCATION NEED

CHART 4: INDEX OF EDUCATION NEED

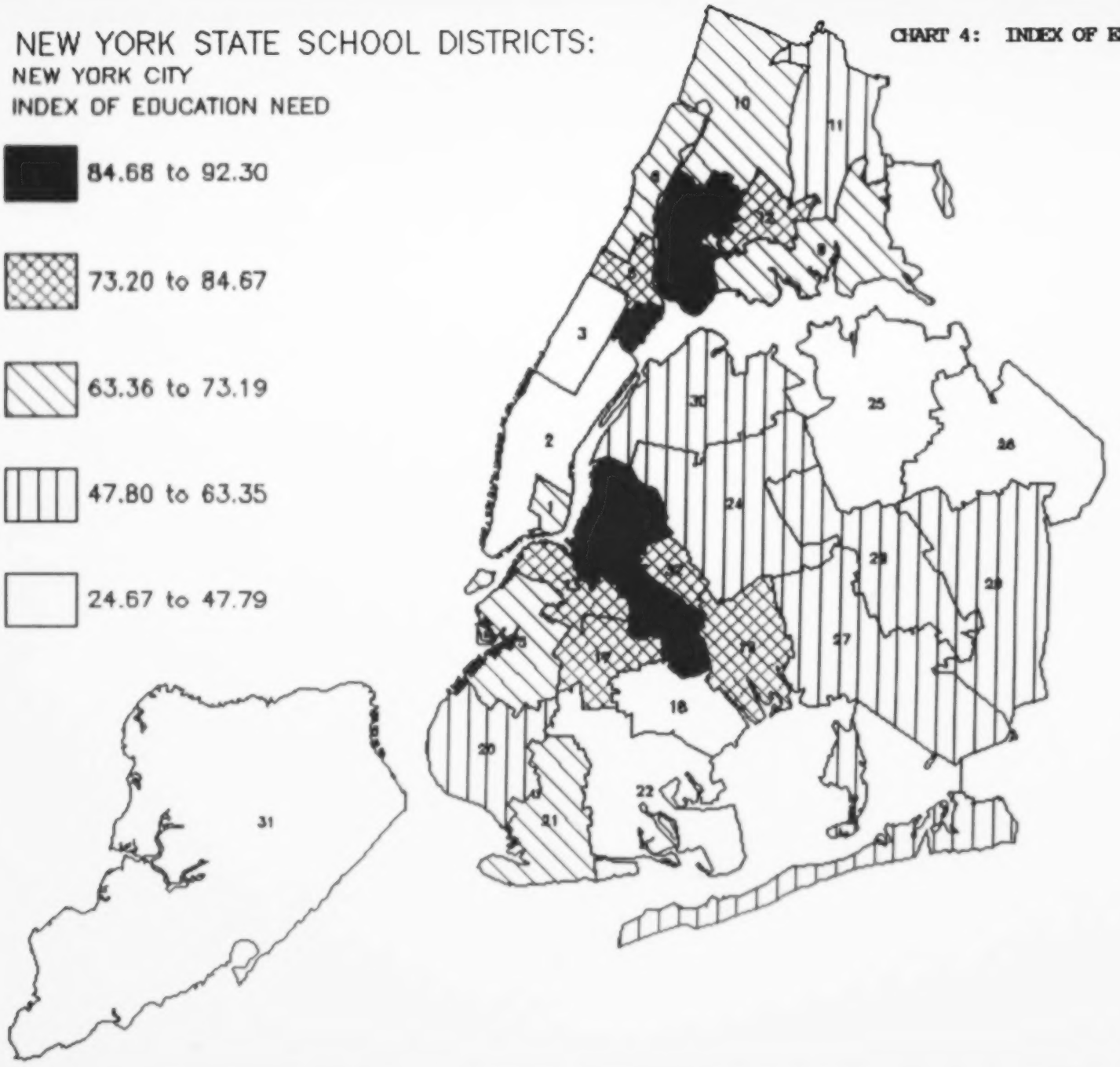
84.68 to 92.30

73.20 to 84.67

63.36 to 73.19

47.80 to 63.35

24.67 to 47.79



INDIVIDUAL VALUES AND INDICES USED TO DEVELOP EDUCATION INDEX OF NEED

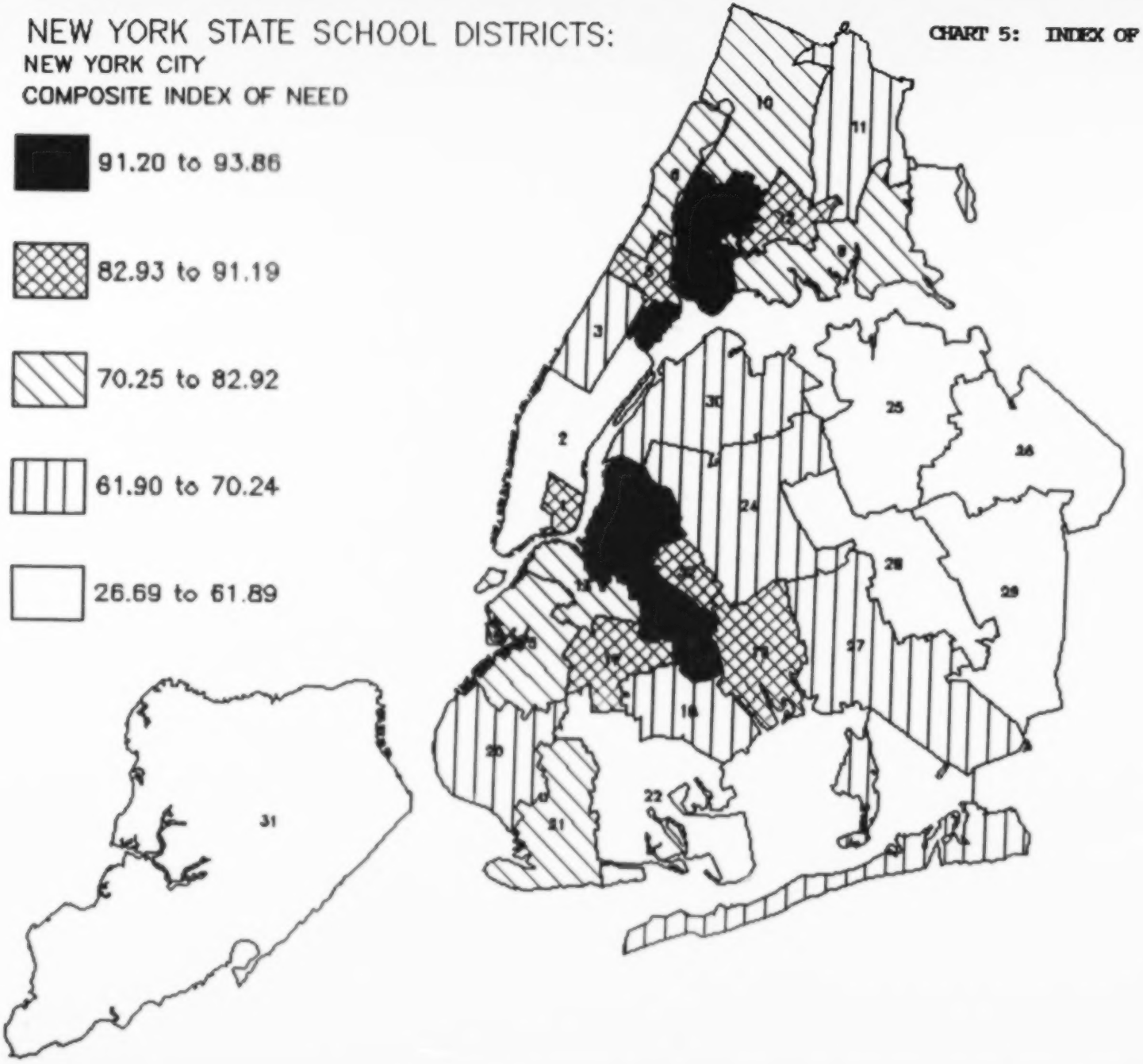
Community School District	Employment Rate of High School Graduates 16 to 19		% of 16 to 19 Year Old Dropouts		College Attendance Rate for 18 to 24 Year Olds		% Adults 25 + Nongraduates of High School	
	Value	Index[a]	Value	Index[a]	Value	Index[a]	Value	Index[a]
1	80.79%	62.78	26.38%	98.53	38.29%	28.78	50.44%	97.59
2	87.83	38.82	10.70	68.67	66.11	1.34	19.39	13.25
3	77.04	72.42	13.21	81.53	59.78	3.35	24.41	22.89
4	69.97	85.68	20.87	96.12	21.12	70.01	63.30	99.73
5	72.47	82.60	18.33	92.50	27.95	51.94	53.39	98.13
6	84.32	51.67	19.52	93.98	31.01	42.97	52.13	97.86
7	73.85	80.46	34.80	99.60	15.03	89.56	62.64	99.60
8	81.71	59.84	16.76	90.23	30.32	44.98	51.99	97.72
9	69.51	86.35	27.02	98.80	17.91	81.39	56.20	98.93
10	83.27	54.62	20.27	95.18	34.06	36.81	44.21	93.57
11	86.03	45.25	10.28	65.86	39.70	26.10	43.00	91.70
12	82.89	55.69	21.73	96.92	22.67	64.12	59.36	99.33
13	74.04	80.19	17.30	90.76	33.85	37.22	40.59	86.75
14	70.50	84.74	23.15	97.46	20.98	70.95	63.32	99.87
15	84.46	50.87	18.85	93.04	29.95	46.32	48.81	96.92
16	72.29	82.73	21.01	96.25	21.98	66.27	54.14	98.53
17	72.27	82.86	15.40	88.22	27.84	52.21	39.08	80.59
18	86.10	45.11	9.04	57.56	43.32	20.08	36.45	68.41
19	75.17	76.97	18.31	92.24	21.68	67.87	52.93	97.99
20	88.03	38.15	13.60	83.00	38.28	28.92	44.78	94.24
21	88.13	55.02	13.39	82.06	40.49	24.23	44.84	94.51
22	85.37	48.73	11.30	72.82	45.35	17.27	32.84	51.67
23	59.33	92.37	18.76	92.64	17.58	82.06	58.24	99.20
24	87.30	41.37	13.40	82.20	36.16	31.86	45.66	95.18
25	90.95	28.38	9.40	59.97	50.20	11.91	30.02	41.10
26	87.85	38.69	5.49	31.86	57.07	5.35	24.22	22.76
27	87.66	39.63	14.37	84.87	33.07	38.55	42.35	90.36
28	83.66	53.41	13.58	82.86	46.36	16.20	30.26	42.03
29	77.43	71.08	9.63	61.45	37.60	30.12	32.60	50.07
30	89.77	32.66	13.05	80.86	38.60	27.44	43.96	93.31
31	87.81	38.96	9.64	61.71	35.72	33.60	31.46	46.72
32	83.28	54.48	30.85	99.20	16.68	85.01	68.30	100.00
State Median	84.96%	50.07	8.13%	50.07	28.57%	50.07	32.60%	50.07

[a] Percentile of district.

NEW YORK STATE SCHOOL DISTRICTS:

NEW YORK CITY
COMPOSITE INDEX OF NEED

CHART 5: INDEX OF COMPOSITE NEED



INDIVIDUAL INDICES AND COMPOSITE INDEX OF NEED FOR NEW YORK CITY COMMUNITY SCHOOL DISTRICTS BASED ON 12 VARIABLES

Community School District	Index of Economic Need	Index of Social Need	Index of Education Need	Composite Index of Need
1	81.19	96.05	71.92	83.05
2	36.04	78.08	30.52	48.22
3	51.47	96.32	45.05	64.28
4	92.97	97.86	87.88	92.90
5	91.93	98.56	81.29	90.60
6	79.25	97.89	71.62	82.92
7	88.29	99.03	92.30	93.21
8	78.65	95.18	73.19	82.34
9	90.66	97.62	91.37	93.22
10	70.48	95.48	70.05	78.67
11	51.97	87.68	57.23	65.63
12	87.65	96.72	79.02	87.80
13	77.64	97.26	73.73	82.88
14	88.86	97.16	88.25	91.42
15	69.85	95.35	71.79	78.99
16	96.72	94.68	85.94	92.45
17	87.05	95.65	75.97	86.22
18	62.25	90.33	47.79	66.79
19	89.46	96.69	83.77	89.97
20	60.64	83.37	61.08	68.36
21	66.43	89.02	63.96	73.14
22	48.09	81.56	47.62	59.09
23	92.14	97.86	91.57	93.85
24	50.47	86.55	62.65	66.56
25	33.17	70.35	35.34	46.29
26	18.44	36.95	24.67	26.68
27	59.94	87.42	63.35	70.24
28	47.29	84.57	48.63	60.16
29	49.90	82.60	53.18	61.89
30	54.79	87.38	58.57	66.91
31	37.15	67.77	45.25	50.06
32	90.03	98.86	84.67	91.19